

WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY  
LETTERS PATENT OF THE UNITED STATES IS:

1. A fogging device (26) for introducing water and/or  
5 vapor into an intake air flow (10, 27) of a gas turbine  
(1-3), characterized in that the fogging device (26)  
has sound-absorbing means (31, 35).
2. The fogging device (26) as claimed in claim 1,  
10 characterized in that the means (31, 35) are designed  
as a plurality of tubular elements (31) arranged  
essentially parallel to the direction of flow of the  
intake air flow (10, 27).
3. The fogging device (26) as claimed in claim 2,  
15 characterized in that cavities between the elements  
(31) are of sound-absorbing design.
4. The fogging device (26) as claimed in either of  
20 claims 2 and 3, characterized in that water and/or  
vapor is introduced into the intake air flow via  
nozzles (33), the nozzles (33) being arranged on the  
inside of the tubular elements (31) and spraying water  
into the interior space, and there are preferably at  
25 least two nozzles (33) distributed over the  
circumference per element (31).
5. The fogging device (26) as claimed in one of  
claims 2 to 4, characterized in that the tubular  
30 elements (31) have a variable diameter along their  
length, in which case they preferably have in  
particular a constriction in the center region, the  
constriction in particular being designed in such a way  
that the elements (31) have essentially the same  
35 diameter on the inlet side and outlet side and in the  
center region have a diameter which is smaller by 20 to  
30%.

6. The fogging device (26) as claimed in claims 4 and 5, characterized in that the nozzles (33) are arranged in the region of the constriction.

5 7. The fogging device (26) as claimed in one of claims 2 to 6, characterized in that at least two supporting walls (34) are arranged essentially perpendicularly to the direction of flow of the intake air flow (10, 27), between which walls (34) the water  
10 (29) is fed and into which the tubular elements (31) are admitted in such a way as to pass through the walls (34).

15 8. The fogging device (26) as claimed in one of the preceding claims, characterized in that water having a droplet size within the range of 10 to 50  $\mu\text{m}$  is sprayed into the intake air flow (10, 27) via nozzles (33).

20 9. A method of increasing or regulating the power output of a gas turbine (1-3) using a fogging device (26) as claimed in one of claims 1 to 8.

25 10. The method as claimed in claim 9, characterized in that the fogging device (26) sprays the water into the intake air flow (10, 11, 27) essentially directly upstream of a first compressor stage (1) and/or of a second compressor stage (2) and if need be downstream of a further silencer (25).